

We claim:

1. A method of making an electrically programmable memory element, comprising the steps of:

providing a first material;

5 removing a portion of said first material;

replacing at least a portion of said removed first material with a second material, said second material having a resistivity which is different from the resistivity of said removed first material; and

10 introducing a programmable resistance material proximate to said second material and distant from said first material.

2. The method of claim 1, wherein said second material has a resistivity which is greater than the resistivity of said removed  
15 first material.

3. The method of claim 1, further comprising the step of:  
before introducing said programmable resistance material,  
increasing the resistivity of at least a portion of said second  
20 material.

4. The method of claim 3, wherein said increasing step includes a doping step.

25

5. The method of claim 3, wherein said increasing step includes an ion implantation step.

6. The method of claim 1, wherein said programmable resistance material is a phase change material.

7. The method of claim 1, wherein said programmable resistance material includes a chalcogen element.

10 8. The method of claim 1, wherein said first material is a conductive material.

9. The method of claim 1, wherein said second material is a conductive material.

15